CLAIMS

What is claimed is:

1. A three dimensional CAD model of a composite part to include a plurality of plies including a tool side ply and a subsequent ply and to be formed on a tool having a shape, the model comprising:

a first CAD native shape representative of the shape of the tool; and

a second CAD native shape representative of the tool side ply.

2. The model of claim 1, wherein the second CAD native shape further comprising a first trimmed CAD native shape being a trim of the first CAD native shape.

3. The model of claim 2, further comprising a property associated with the first trimmed CAD native shape.

4. The model of claim 3, the property being representative of the material to be selected for the tool side ply.

5. The model of claim 3, the property being representative of the orientation to be selected for the tool side ply.

6. The model of claim 2, the first trimmed CAD native shape further comprising a surface.

7. The model of claim 2, the first trimmed CAD native shape further comprising a sheet solid.

8. The model of claim 2, further comprising a second trimmed CAD native shape representative of the subsequent ply.

9. The model of claim 8, further comprising a stacking order defined by a name of a collector for the first trimmed CAD native shape and a name of a collector for the second trimmed CAD native shape.

10. The model of claim 8, further comprising an offset by which the second trimmed CAD native shape is offset from the first trimmed CAD native shape.

11. The model of claim 10, further comprising a stacking order defined by the offset.

12. The model of claim 1, further comprising the second trimmed CAD native shape draped on the first trimmed CAD native shape.

13. A method of three dimensional CAD modeling of a composite part to include a plurality of plies including a tool side ply and a subsequent ply, and to be formed on a tool, the method comprising:

representing the shape of the tool with a first CAD native shape;

representing the tool side ply with a second CAD native shape; and

locating the tool side ply adjacent the first CAD native shape.

14. The method of claim 13, further comprising associating a property with the second CAD native shape.

15. The method of claim 14, further comprising representing a material to be selected for the tool side ply with the property.

16. The method of claim 14, further comprising representing an orientation to be selected for the tool side ply with the property.

17. The method of claim 14, further comprising:

representing the subsequent ply with a third CAD native shape; and

offsetting the third CAD native shape from the first CAD native shape by a distance.

18. The method of claim 17, further comprising draping the third CAD native shape on the second CAD native shape.

19. The method of claim 13 wherein the representing the tool side ply further comprises trimming the first CAD native shape whereby the second CAD native shape is created.

20. The method of claim 13 wherein the second CAD native shape is a surface.

21. The method of claim 13 wherein the second CAD native shape is a sheet solid.

22. The method of claim 13, further comprising representing the subsequent ply with a third CAD native shape and locating the third CAD native shape adjacent the second CAD native shape.

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23. The method of claim 22, further comprising defining a stacking order with a name of a collector for the second CAD native shape and a name of a collector for the third CAD native shape.

24. A method of developing a composite part to include a ply, the method comprising:

accessing a file including a three dimensional CAD model of the composite part, the model including a first CAD native shape representative of the ply; and

viewing the model with a low-end viewer.

25. The method of claim 24, the developing of the composite part being selected from at least one of the group consisting of designing, manufacturing, testing, operating, and maintaining the composite part.

26. A method of developing a composite part to include a plurality of plies including a ply, the method comprising:

creating a file including a three dimensional CAD model of the composite part, the model including a first CAD native shape representative of the ply; and

allowing viewing of the model with a low-end viewer.

27. The method of claim 26, the developing of the composite part being selected from at least one of the group consisting of designing, manufacturing, testing, operating, and maintaining the composite part.